

PATENT
Customer No. 22,852
Attorney Docket No. 8157.0003-03

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:)
)
Paul GILSON et al.) Prior Group Art Unit: 2814
)
Application No.: UNKNOWN) Prior Examiner: H. Trinh
(Cont. of App. No. 09/921,596))
)
Filed: January 30, 2002)
)
For: EMBOLIC PROTECTION DEVICE)

Assistant Commissioner for Patents
Washington, DC 20231

Sir:

PRELIMINARY AMENDMENT

Prior to examination, please amend this application as follows:

IN THE SPECIFICATION:

Before the first line of the specification please insert the following new paragraph:

--This is a continuation of Application No. 09/921,596, filed August 6, 2001, which is a continuation of U.S. Application No. 09/188,472, filed November 9, 1998, the contents of both applications are incorporated herein by reference.--

IN THE CLAIMS:

Please cancel claims 1-42 and add new claims 43-70 as follows:

43. (New) Apparatus for filtering emboli from blood flowing through a vessel, the apparatus comprising:

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a guide wire having a distal region and a stop on the distal region;
a capture ring disposed for translation on the guide wire, the stop limiting translation of the capture ring in a distal direction; and
a filter sac connected to the capture ring.

44. (New) The apparatus of claim 43 wherein, when the filter sac is deployed in the vessel, rotation or distal translation of the guide wire relative to the capture ring does not displace the filter sac, but retraction of the guide wire in a proximal direction causes the stop to abut against the capture ring.

45. (New) The apparatus of claim 43 further comprising a plurality of self-expanding struts coupled between the filter sac and the capture ring.

46. (New) The apparatus of claim 43 further comprising an elastomeric cone affixed to a distal portion of the filter sac.

47. (New) The apparatus of claim 45 further comprising a cylindrical sleeve coupled between the plurality of self-expanding struts and the filter sac.

48. (New) Apparatus for filtering emboli from blood flowing through a vessel, the apparatus comprising:

a guide wire having a first portion having a first diameter and a distal region having a second diameter greater than the first diameter; and

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a filter element having a capture ring disposed for translation on the first portion, the capture ring having an aperture greater than the first diameter but smaller than the second diameter,

wherein rotation or distal translation of the guide wire relative to the capture ring does not displace the filter element.

49. (New) The apparatus of claim 48 wherein the filter element comprises an expandable sac.

50. (New) The apparatus of claim 49 wherein the filter element further comprises a plurality of struts coupling the expandable sac to the capture ring.

51. (New) The apparatus of claim 50 wherein the struts are self-expanding.

52. (New) The apparatus of claim 49 wherein the filter element further comprises an elastomeric cone affixed to a distal portion of the expandable sac.

53. (New) The apparatus of claim 48 wherein the guide wire further comprises a flange disposed on the distal region having a diameter larger than the diameter of the aperture in the capture ring.

54. (New) The apparatus of claim 50 wherein the filter element further comprises a cylindrical sleeve coupled between the plurality of struts and the expandable sac.

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55. (New) The apparatus of claim 49 wherein the filter element further comprises a distal ring coupled to the expandable sac.

56. (New) The apparatus of claim 55 wherein the distal ring has a bore with a diameter greater than the second diameter.

57. (New) The apparatus of claim 48 wherein the filter region has a contracted state suitable for transluminal delivery, and the distal region has a length that is greater than a length of the filter element in the contracted state.

58. (New) The apparatus of claim 48 wherein the filter region has a contracted state suitable for transluminal delivery, the apparatus further comprising a flexible catheter having a lumen and a push tube disposed in the lumen, the push tube having a guide wire lumen for accepting the guide wire, and wherein the lumen is sized to accept the filter element in the contracted state.

59. (New) Apparatus for filtering emboli during treatment of occlusive disease in a vessel, the apparatus comprising:

a guide wire having a first diameter and a distal region having a second diameter greater than the first diameter;

a filter element having a sac coupled to a capture ring, the capture ring having an aperture greater than the first diameter but smaller than the second diameter,

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wherein the filter element is disposed on the guide wire and the guide wire extends through the aperture with the distal region disposed distally of the capture ring, so that when the filter element is deployed in the vessel, rotation or distal translation of the guide wire does not displace the filter element, but retraction of the guide wire in a proximal direction causes the distal region to abut against the capture ring.

60. (New) The apparatus of claim 59 wherein the filter element further comprises a plurality of self-expanding struts coupled between the sac and the capture ring.

61. (New) The apparatus of claim 60 wherein the filter element further comprises an elastomeric cone affixed to a distal portion of the sac.

62. (New) The apparatus of claim 59 wherein the filter element further comprises a cylindrical sleeve coupled between the plurality of self-expanding struts and the capture ring.

63. (New) The apparatus of claim 59 wherein the filter element further comprises a distal ring coupled to the sac.

64. (New) The apparatus of claim 63 wherein the distal ring has a bore with a diameter greater than the second diameter.

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65. (New) A method of filtering emboli from blood flowing through a vessel, the method comprising:

providing a guide wire having a distal region including a stop, and a filter element having a capture ring disposed for translation on the guide wire proximal of the stop;

transluminally inserting the guide wire and filter element into a vessel;

deploying the filter element to engage a wall of the vessel, the filter element filtering emboli out of blood flowing through the vessel;

advancing a treatment device along the guide wire to treat a portion of the vessel proximal to the location of the filter element, rotation or distal translation of the guide wire relative to the filter element imparted by the treatment device not displacing the filter element.

66. (New) The method of claim 65 further comprising a step of, after use of the treatment device is completed, pulling the guide wire proximally so that the stop engages the capture ring and causes the filter element to return to the contracted state.

67. (New) The method of claim 65 further comprising:

providing a delivery sheath; and

compressing the filter element to a contracted state to insert the filter element within the delivery sheath.

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68. (New) The method of claim 65 wherein the filter element comprises an expandable sac, and deploying the filter element comprises expanding the expandable sac so that a perimeter of the expandable sac contacts the wall of the vessel.

69. (New) The method of claim 68 wherein the filter element further comprises a cylindrical sleeve and deploying the filter element further comprises expanding the cylindrical sleeve against the wall of the vessel.

70. (New) The method of claim 65 further comprising providing a catheter having a lumen, and pulling the guide wire proximally causes the filter element to become retracted within the lumen.

REMARKS

By this Preliminary Amendment, Applicants have canceled claims 1-42, without prejudice or disclaimer of the subject matter thereof, and added new claims 43-70. Accordingly, claims 43-70 are pending in this application.

In accordance with 35 U.S.C. §135(b)(1) and 37 C.F.R. 1.607(c) Applicants hereby notify the U.S. Patent and Trademark Office that pending claims 43-54, 56-62 and 64-70 are identical copies of claims 1-26 of U.S. Patent No. 6,179,859 issued on January 30, 2001, to Bates et al.

Applicants have submitted an Information Disclosure Statement with this Preliminary Amendment. Consideration of the references cited in the Information Disclosure Statement is requested.

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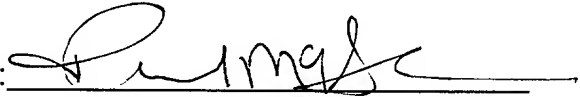
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If there is any fee due in connection with the filing of this Preliminary
Amendment, please charge the fee to our Deposit Account No. 06-0916.

Respectfully submitted,

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Dated: January 30, 2002

By: 

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